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GRC Environmental Programs Manual—Chapter 8

Spill Control

Approved by: Energy and Environmental Management Office Chief

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Change Record

Revision	Effective Date	Expiration Date	C-25, Change Request #	Description
A	4/2015	4/2020		Changed SHED to Energy and Environmental Management Office (EEMO) throughout document Updated links and corrected several form names.

^{**}Include all information for each revision. Do not remove old revision data. Add new rows to table when space runs out by pressing the tab key in the last row, far right column.

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Chapter 8.—Spill Control

NOTE: This chapter is maintained and approved by the Energy and Environmental Management Office (EEMO). The last revision date of this chapter was January 2015. The current version is maintained on the Glenn Research Center internet at http://www.grc.nasa.gov/WWW/FTD/EEMO/index.html. Approved by: Chief of Energy and Environmental Management Office.

1.0 PURPOSE

This chapter establishes policies and procedures for dealing with activities at the NASA Glenn Research Center's (GRC's) Lewis Field (LF) and Plum Brook Station (PBS) that have the potential to contaminate indoor or outdoor environments with spilled material (i.e., oil, chemicals, asbestos, etc.). This chapter supports GRC's Environmental Policy, which promotes pollution prevention, regulatory compliance, and continuous improvement.

Following the guidelines in this chapter will help achieve some of GRC's environmental objectives and targets such as the reduction of spills and releases, the identification and implementation of pollution prevention activities, and the reduction of solid waste generation. Achievement of these targets can be tracked through the following records: Spill Occurrence Reports for LF (Appendix B) and Emergency Notification Checklists for PBS (Appendix C), pollution prevention committee and plan results (NASA Environmental Tracking System, NETS), and the number of regulatory noncompliances found.

2.0 APPLICABILITY

This chapter applies to all civil servant and contractor employees assigned to GRC sites and to any NASA-controlled, Government-owned facilities associated with GRC.

3.0 BACKGROUND

The Clean Water Act (CWA) became law in 1972. The CWA is the cornerstone of surface-water quality protection in the United States. (The CWA does not deal directly with ground water or with water quantity issues.) The statute employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways, to finance municipal wastewater treatment facilities, and to manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters so that they can support the protection and propagation of fish, shellfish, wildlife, and recreation in and on the water. Section 311 of the CWA prohibits the discharge of oil or hazardous substances into or upon the navigable waters of the United States.

The CWA also introduced a permit system for regulating point sources of pollution. Point sources include industrial facilities (including manufacturing, mining, oil and gas extraction, and service industries), municipal government facilities, and other government facilities (such as military bases). Point sources may not discharge pollutants to surface waters without a permit from the National Pollutant Discharge Elimination System. This system is managed by the U.S. Environmental Protection Agency (EPA) in partnership with State environmental agencies. EPA has authorized 46 States to issue permits directly to the discharging facilities.

4.0 POLICY

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It is GRC policy to minimize spill potential through engineering and administrative controls. LF has about 60 outfalls and 26 oil/water separators. PBS has 7 outfalls and 3 oil/water separators. Should a spill occur, containment and cleanup procedures shall be promptly implemented to assure compliance with all applicable Federal, State, and local regulations and to minimize the effect on the environment.

5.0 RESPONSIBILITIES

When the responsible entity at PBS differs from its LF counterpart, the name of the responsible entity at PBS is given in parentheses following the task. The basics for LF Emergency Response and Incident Investigation are shown in Figure **D.1** and Figure **D.2**, respectively (Appendix **D**).

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5.1 Users

The primary responsibility for spill prevention lies with the user. Members of the Energy and Environmental Management Office (EEMO) are available to advise users on prevention and response. Reactions to spills shall be preplanned and incorporated into use procedures. Specific responsibilities follow:

- Report any spill by calling the GRC dispatcher at 911 from an internal phone, at 216–433–8888 from an external phone at LF, or at 419–621–3222 from an external phone at PBS; if possible, identify the material and estimate the volume of material released
- For small spills, attempt to contain and clean up the spill
- For larger spills, take immediate emergency response actions as required, or attempt to contain the spill, if practical. If there are any questions with regard to safety, evacuate the area
- Block access to floor drains, storm drains, or drainage ditches by using absorbent booms and floor drain
 covers
- Maintain the containment and cleanup supplies necessary for small spills, and request any additional supplies needed from Waste Management at LF at 3–2124 or from the support service contractor environmental staff at PBS
- Complete a NASA Mishap Information System (NMIS) report https://nmis.sma.nasa.gov/
- Receive spill-prevention training and proper response to spills of hazardous materials
- Dispose of waste derived from the cleanup of petroleum products as hazardous or controlled waste
- For a nonemergency spill, fill out a **GRC260A**, Waste Disposal Request, and e-mail it to Waste Management for waste disposal services
- Provide accounting information to waste management staff to pay for post-spill waste-disposal needs
- Investigate the causes of the spills, recommend procedures or policies to prevent a reoccurrence, and provide information to SHED

5.2 Discoverer of a Spill

- Reports the spill to the LF dispatcher at 911 or 216–433–8888 or to the PBS dispatcher at 911 or 419–621–3222)
- Remains on the scene to provide information to the incident commander

5.3 Energy and Environmental Management Office

- Maintain the Integrated Contingency Plan and update it as necessary
- Maintain current lists of reportable quantities and provide technical advice to responders
- Provide technical advice to the person who spilled the material
- Assist the emergency management specialist in investigations
- Assist in determining exposure limits, personal protective equipment, and containment measures
- Serve as the incident commander during the response and recovery phases of environmental emergencies as stated in the GRC Emergency Preparedness Plan
- Maintain spill containment and cleanup supplies (support service contract environmental staff at PBS)
- Provide for containment and cleanup at spill sites whenever possible, usually through an independent contractor (support service contract environmental staff at PBS)
- Maintain complete documentation for initial reports on all reportable quantity spills and for nonreportable quantity spills

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- Notify the GRC Office of Community and Media Relations (Plum Brook Management Office (PBMO) environmental manager at PBS)
- Advise GRC and NASA Headquarters senior management of the event as necessary

5.4 Glenn Security Management Office

5.4.1 Security Dispatcher

The security dispatcher notifies Federal and local regulatory agencies of spills as required in the Integrated Contingency Plan (PBMO environmental manager at PBS)

5.4.2 Security Personnel

Security personnel provide area control, security, and initial response at spill sites (support service contract environmental staff at PBS)

5.4.3 Emergency Management Specialist

The emergency management specialist develops and maintains the LF Emergency Preparedness Plan.

6.0 REQUIREMENTS

6.1 Response

Security shall make the initial response to spills, followed by representatives of EEMO, who then act as incident commanders for remedial actions (Figure **D.1**)

6.2 Reporting

The following organizations shall receive information on reportable spills:

6.2.1 Lewis Field

- Brook Park Fire Department
- National Response Center
- Ohio EPA
- U.S. EPA
- Cuyahoga County Emergency Communication System
- Northeast Ohio Regional Sewer District

6.2.2 Plum Brook Station

- Perkins Township Fire Department
- National Response Center
- Ohio EPA
- U.S. EPA
- Erie County Emergency Management Agency

6.3 Training

6.3.1 Incident Commanders

Incident commanders shall be trained in the use of the Incident Command System (ICS).

6.3.2 Oil-Handling Personnel

Oil-handling personnel shall be trained in the proper operation and maintenance of equipment to prevent discharges; discharge protocols; applicable laws, rules, and regulations; and the contents of the Spill Prevention, Control and Countermeasure plan

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6.4 Recordkeeping

EEMO shall keep records of incidents at LF (Appendix B) and at PBS (Appendix C). Spills that require reporting to regulating agencies are also recorded in the NETS system.

7.0 RECORDS

Spill Occurrence Reports, maintained by EEMO, include the date, location, material spilled, quantity, and remedial actions taken. Hard copies of LF spill reports are kept in Building 21, Room 135 (Appendix B). EEMO shall provide Spill Occurrence Reports to the Cuyahoga County Emergency Communications System and the Ohio EPA when requested.

NETS electronic reports.—Maintained by EEMO.

NMIS reports made by responsible parties to track remedial actions.—Maintained by EEMO.

REFERENCES 8.0

Document number	Document name
33 U.S.C. 1321	U.S. Code (U.S.C), Oil and Hazardous Substance Liability
40 CFR 110	Code of Federal Regulations (CFR), U.S. EPA, Discharge of Oil
40 CFR 112	U.S. EPA, Oil Pollution Prevention
40 CFR 302	U.S. EPA, Designation, Reportable Quantities, and Notification
40 CFR 355	U.S. EPA, Emergency Planning and Notification, Subpart C
40 CFR 761	U.S. EPA, Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
GLM-FE-8500.1-5	Glenn Manual (GLM), Environmental Programs Manual, Chapter 5, Management of Hazardous Materials, Hazardous Wastes, and Universal Wastes for Reuse, Recycling, and Disposal
OAC 3750–25	Ohio Administrative Code (OAC), Emergency Release Notification
ORC 3750.06	Ohio Revised Code (ORC), Notice of Release of Hazardous Substance

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APPENDIX A.—DEFINITIONS AND ACRONYMS

Clean Water Act (CWA)

Code of Federal Regulations (CFR)

Emergency Preparedness Plan.—Plan used to provide specific procedures for awareness, prevention, preparedness, response, and recovery for a variety of situations.

Emergency response team (ERT)

Energy and Environmental Management Office (EEMO)

Environmental Protection Agency (EPA)

Glenn Research Center (GRC)

Glenn Manual (GLM)

Hazardous material (HAZMAT).—Any material defined as hazardous under 29 CFR 1910.120(c) including material presenting health and/or physical hazard. Such material has one or more toxic, flammable, corrosive, or reactive properties. All materials listed under Title M of the Superfund Amendments and Reauthorization Act of 1986 (SARA) are included.

Hazardous Waste Operations and Emergency Response (HAZWOPER)

Integrated Contingency Plan.—Plan used to provide compliance with a multitude of regulations.

Incident Reporting Information System (IRIS)

Lewis Field (LF)

Nonreportable quantity spills.—Spills that present low hazard potential to workers or to the environment. Nonreportable quantity spills can be contained and cleaned up with only minor difficulty. Cleanup of nonreportable spills is the responsibility of the GRC directorate managing the material. Outside support may not be necessary for nonreportable quantity spills.

NASA Environmental Tracking System (NETS)

Nonreportable quantity spills.—Spills that present low hazard potential to workers or to the environment. Nonreportable quantity spills can be contained and cleaned up with only minor difficulty. Cleanup of nonreportable spills is the responsibility of the GRC directorate managing the material. Outside support may not be necessary for nonreportable quantity spills.

Ohio Administrative Code (OAC)

Ohio Revised Code (ORC)

Plum Brook Management Office (PBMO)

Plum Brook Station (PBS)

Reportable quantity (RQ) spills.—Spills that often involve large volumes of material and present significant hazards to workers or to the environment. Any spill reportable under Environmental Protection Agency Regulations, 40 CFR 302, shall be considered a reportable quantity spill. Reportable quantity spills include, but are not limited to, the materials and volumes given in appendix B of 40 CFR 355 under extremely hazardous substances (EHS) reportable quantities or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) reportable quantities. All expenses incurred as a result of a reportable quantity release will be charged to the organization responsible for the spill.

U.S. Code (U.S.C.)

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APPENDIX B.—SPILL OCCURRENCE REPORT

NASA GLENN RESEARCH CENTER/LEWIS FIELD

21000 Brookpark Road

Cleveland, Ohio 44135

(To be filled out by NASA GRC EEMO)

NAME OF FACILITY:
NAME OF OPERATOR:
DATE OF SPILL: TIME:
DATE OF INITIAL FACILITY OPERATION: <u>JANUARY 23, 1941</u>
LOCATION:
MAXIMUM STORAGE CAPACITY: NORMAL DAILY THROUGHPUT:
MATERIAL SPILLED: AMOUNT:
CAUSE:
CORRECTIVE ACTION TAKEN:
PLANS FOR PREVENTING RECURRENCE:
SPILLAGE ENTERED: NO WATERWAY AFFECTED:
STORM SEWER OR ROCKY RIVER
SANITARY SEWER INDUSTRIAL WASTE SEWER
PAVED AREAS GRASS / GRAVEL AREAS
SECONDARY CONTAINMENT (EXPLAIN)
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B.1 Spill Occurrence Report No	tifications		
BROOK PARK FIRE DEPARTMI	ENT 7-433-1212		
DATE: T	TIME:	BY:	
OHIO ENVIRONMENTAL PROJ	ECTION AGENCY 7-1-800-282	-9378	
DATE: T	IME:	BY:	
NATIONAL RESPONSE CENTER	R 7-1-800-424-8802		
DATE: T	TIME:	BY:	
COUNTY EMERGENCY COMM	UNICATION SYSTEM CENTE	R 7-771-1365	
DATE: T	IME:	BY:	
WHEN APPLICABLE:			
REGIONAL SEWER DISTRICT:	7-641-6000		
DATE: T	TIME:	BY:	
FAIRVIEW PARK FIRE DEPART	ΓMENT 7-333-1212		
DATE: T	TIME:	BY:	
CLEVELAND FIRE DEPARTME	NT 7-664-6664		
DATE: T	TME:	BY:	

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APPENDIX C.—EMERGENCY NOTIFICATION CHECKLIST NASA GLENN RESEARCH CENTER AT PLUM BROOK STATION 6100 COLUMBUS AVENUE, SANDUSKY, OHIO 44870

Name of Reporter:	Telephone:				
Location:					
Type of Incident:	Oil Spill Chemical Spill				
	Fire Injury/Medical				
Time of Incident: _	Date of Incident:				
Name and Quantity of Materials Involved:					
Source/Cause (if no	t known, do not speculate):				
Expected Duration/	Magnitude of Ongoing Release (if applicable):				
Weather Conditions	s:				
Corrective Actions	Taken to Remove/Mitigate Incident:				
Possible Hazards (I	Environmental or to Human Health) outside Facility:				
Extent of Injuries, I	Property Damage, and/or Environmental Damage (if known):				
	Toporty Zumage, and of Zuvnommental Zumage (if mio vin).				
Spillage Entered:					
	Stream				
	Paved Areas				
Grassed Areas	Secondary Containment:				
Other:					
Pathways by which	Public may be Affected (if applicable):				
Plans for Preventing	g Recurrence:				
Comments:					
April 20, 2015					

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Notified?		SPILL OCCURRENCE REPORT N	NOTIFICATION	
MANDATORY NOTHICATION IF INCIDENT PRESENTS A RISK OUTSIDE THE FACILITY	Y N	EEMO Plum Brook - Robert Lallier (216-905-122	29)	
		Date: Time:	By:	
	Y N	GRC Office of Community & Media Relations (2	16-433-2037)	
	I [N [Date: Time:	By:	
	Y N	GRC Emergency Preparedness Coordinator –Seth	Harbaugh (216-513-6538)	
		Date: Time:	By:	
	Y N	Ohio Environmental Protection Agency (800-282-9378 within 30 minutes of discovery)		
		Date: Time:	By:	
	Y N	National Response Center (800-424-8802 within	1 hour of discovery)	
	1 N	Date: Time:	By:	
	$Y \square N \square$	Erie County Emergency Management Agency (419-627-7617)		
		Date: Time:	By:	
	Y N	Perkins Township Fire Department (419) 626-133	34	
		Date: Time:	By:	
	$Y \square N \square$	Perkins Township Police Department (419) 627-0	824	
	1 11	Date: Time:	By:	
ES ANT	Y N	Firelands Regional Medical Center-Dr. Michael E	Babiuch (419) 557-7455	
RVIC VARR		Date: Time:	By:	
Y SEI	Y N	Erie County Water Department (419) 627-7666 o	r (419) 625-2372 (emergency after 4 PM)	
		Date: Time:	By:	
MER TE STI	Y N	Columbia Gas of Ohio (Natural Gas) (800) 344-4	077	
NAL I AS TI		Date: Time:	By:	
ADDITIONAL EMERCENCY SERVICES REQUESTED AS THE SITUATION WARRANTS	Y N	Ohio Edison (Electric Power) (800) 228-9176		
		Date: Time:	By:	
	Y N	Erie County Sheriff's Office (419) 627-7668		
		Date: Time:	By:	
	Y N	Ohio State Highway Patrol (419) 625-6565		
		Date: Time:	By:	

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APPENDIX D.—PROCESS FLOW CHARTS

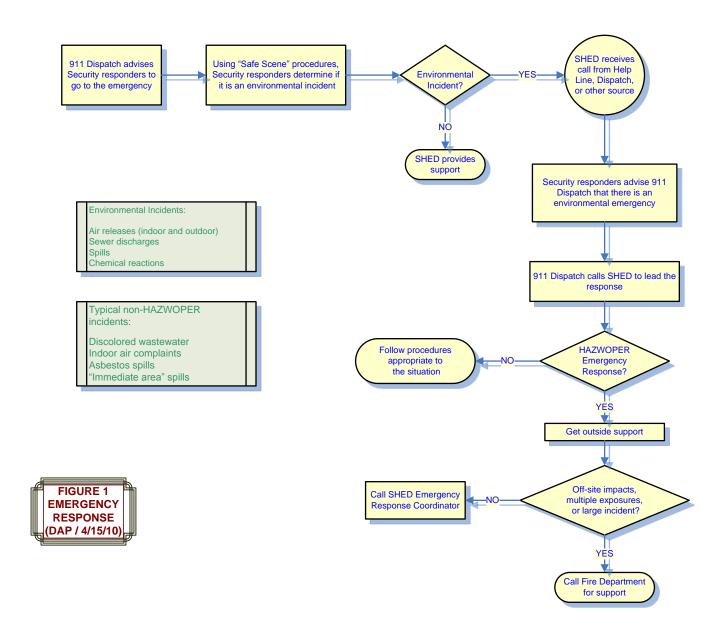


Figure D.1.—Emergency response.

NOTE: SHED has been replaced by EEMO. Thus, all references to SHED should be read as EEMO

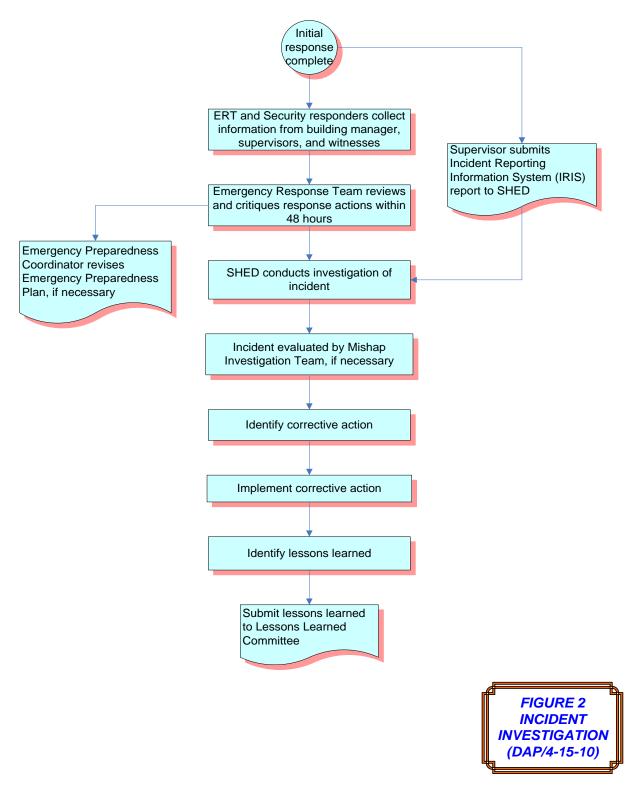


Figure D.2.—Incident investigation.

NOTE: SHED has been replaced by EEMO. Thus, all references to SHED should be read as EEMO